

LM
PATENT
Case SU-7275

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ERIC W. LIIMATTA

SERIAL NO.: 10/603,130

FILED: JUNE 24, 2003

**MICROBIOCIDAL CONTROL IN THE
PROCESSING OF POULTRY**

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Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450
Sir:

FOURTH SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Enclosed herewith for consideration by the Examiner is a Fourth Supplemental Information Disclosure Form PTO/SB/08A and PTO/SB/08B. There are 118 items listed, but only 93 are enclosed.

Respectfully Submitted,

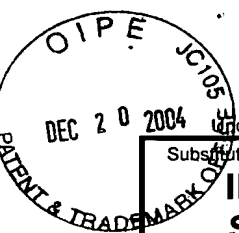
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Substitute for form 1449A/PTO		Complete if Known			
INFORMATION DISCLOSURE STATEMENT BY APPLICANT Fourth Supplemental (use as many sheets as necessary)		Application Number	10/603,130		
		Filing Date	June 24, 2003		
		First Named Inventor	Eric W. Liimatta		
		Group Art Unit	---		
		Examiner Name	---		
Sheet	1	of	8	Attorney Docket Number	SU-7275

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	US-18	US-1995639	03-26-1935	Henderson	
	US-19	US-2443429	06-15-1948	Marks	
	US-20	US-2662855	09-07-1950	Kamlett	
	US-21	US-2779764	01-29-1957	Paterson	
	US-22	US-2815311	12-03-1957	Ellis, et al.	
	US-23	US-3412021	11-19-1968	Paterson	
	US-24	US-3519569	07-07-1970	Diaz	
	US-25	US-3558503	01-26-1971	Goodenough, et al.	
	US-26	US-3850833	11-26-1974	Koceich, et al.	
	US-27	US-4235599	11-25-1980	Davis, et al.	
	US-28	US-4297224	10-27-1981	Macchiarolo, et al.	
	US-29	US-4557926	12-10-1985	Nelson, et al.	
	US-30	US-4643835	02-17-1987	Koeplin-Gall, et al.	
	US-31	US-4872999	10-10-1989	Schild, et al.	
	US-32	US-5130033	07-14-1992	Thornhill	
	US-33	US-5141652	08-25-1992	Moore, et al.	
	US-34	US-5209934	05-11-1993	Egis, et al.	
	US-35	US-5264136	11-23-1993	Howarth, et al.	
	US-36	US-5429723	07-04-1995	Atkinson	
	US-37	US-5464636	11-07-1995	Hight, et al.	
	US-38	US-5683654	11-04-1997	Dallmier, et al.	
	US-39	US-5688515	11-18-1997	Kuechler, et al.	
	US-40	US-6068861	05-30-2000	Moore, et al.	
	US-41	US-6069142	05-30-2000	Gaffney, et al.	
	US-42	US-6284144 B1	09-04-2001	Itzhak	

FOREIGN PATENT DOCUMENTS						
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		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				
	FP-8	WO 89/10696	11-16-1989	Great Lakes Chemical		

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		Filing Date	June 24, 2003
		First Named Inventor	Eric W. Liimatta
		Group Art Unit	---
		Examiner Name	---
		Attorney Docket Number	SU-7275
Fourth Supplemental (use as many sheets as necessary)			
Sheet	2	of	8

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	L-35	Clare, A.S., "Marine Natural Product Antifoulants: Status and Potential," Biofouling (1996) 9: 211-229.	
	L-36	S. Tsukamoto, et al., "Ceratinamides A and B: New Antifouling Dibromotyrosine Derivatives from the Marine Sponge <i>Pseudoceratina purpurea</i> ," Tetrahedron (1996) 52: 8181-8186.	
	L-37	W. Miki, K. Kon-ya, and S. Mizobuchi, "Biofouling and Marine Biotechnology: New Antifoulants from Marine Invertebrates," Journal of Marine Biotechnology (1996) 4: 117-120.	
	L-38	H. Genthe, "The Incredible Sponge," Smithsonian (August 1998) 29: 50-58.	
	L-39	M. Givskov, et al., "Eukaryotic Interference with Homoserine Lactone-Mediated Prokaryotic Signaling," Journal of Bacteriology (1996) 178: 6618-6622.	
	L-40	D. Ren, J.J. Sims, and T.K. Wood, "Inhibition of Biofilm Formation and Swarming of <i>Bacillus subtilis</i> by (5Z)-4-Bromo-5-(Bromomethylene)-3-Butyl-2(5H)-Furanone," Letters in Applied Microbiology (2002) 34: 293-299.	
	L-41	M.E. Weeks, "Discovery of the Elements: XVII. The Halogen Family," Journal of Chemical Education (1932) 9: 1915-1938.	
	L-42	A.J. Balard, Annales de Chemie et de Physique (1826), vol 32, ppg 371-372.	
	L-43	H.S. Rzepa, "Elemental and Molecular Heritage: An Internet-Based Display," Molecules (1998) 3: 94-99.	
	L-44	B. Grinbaum and M. Friedman, "Bromine," in Kirk-Othmer Encyclopedia of Chemical Technology 4 th Ed. (New York, NY: John Wiley and Sons, Inc., 2001), vol 4, ppg 548-549.	
	L-45	F. Yaron, "Bromine Manufacture: Technology and Economic Aspects," in "Bromine and Its Compounds," Z.E. Jolles, ed., pp 3-12 (New York, NY: Academic Press, 1966).	
	L-46	"Bromine Brine," Arkansas Geological Commission, web address www.state.ar.us/agc/bromine.htm ; 1 page.	
	L-47	R.D. Bartholomew, "Bromine-based Biocides for Cooling Water Systems: A Literature Review," Paper IVC 98-74 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1998), 30 pages.	

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Sheet	3	of	8

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	L-48	F.W. Tanner and G. Pitner, "Germicidal Action of Bromine," Proceedings of the Society for Experimental Biology and Medicine (1939) 40: 143-145.	
	L-49	T.D. Beckwith and J.R. Moser, Journal of the American Water Works Association (1933) 25: 367-374.	
	L-50	D.R. Wood and E.T. Illing, Analyst (1930), Royal Society of Chemistry, The Analyst, 55: 126-127.	
	L-51	J. A. McCarthy, Journal of the New England Water Works Association (1944) 58: 55-68.	
	L-52	O. Wyss and R.J. Stockton, "The Germicidal Action of Bromine," Arch. Biochem. (1947) 12:267-271.	
	L-53	E.A. Shilov and J.N. Gladtschikova, "On the Calculation of the Dissociation Constants of Hypohalogenous Acids from Kinetic Data," Journal of the American Chemical Society (1938) 60: 490-491.	
	L-54	G.M. Fair, et al., "The Behavior of Chlorine as a Water Disinfectant," Journal of the American Water Works Association (1948) 40: 1051-1061.	
	L-55	E.K. Rideal and U.R. Evans, "The Effect of Alkalinity on the Use of Hypochlorites," Journal of the Society of the Chemical Industry (1921) 40: 64R-66R	
	L-56	C.K. Johns, "Germicidal Power of Sodium Hypochlorite," Industrial and Engineering Chemistry (1934) 26: 787-788.	
	L-57	G.R. Dychala, "Chlorine and Chlorine Compounds" in Disinfection, Sterilization, and Preservation 4 th Ed., S.S. Block, ed., pp. 137-138 and 149-15, (Philadelphia, PA, Lea & Febiger, 1991).	
	L-58	T. Kristoffersen and I.A. Gould, "Effect of Sodium Bromide on the Bactericidal Effectiveness of Hypochlorite Sanitizers of High Alkalinity," Journal of Dairy Science (1958) 41: 950-955.	
	L-59	G.U. Houghton, "Bromine Content of Underground Waters. II. Observations on the Chlorination of Water Containing Free Ammonia and Naturally Occurring Bromide", Journal of the Society of the Chemical Industry (1946) 65: 324-328	
	L-60	H. Farkas-Himsley, "Killing of Chlorine-Resistant Bacteria by Chlorine-Bromine Solutions," Applied Microbiology (1964) 12: 1-6.	
	L-61	P.W. Kabler, "Relative Resistance of Coliform Organisms and Enteric Pathogens in the Disinfection of Water with Chlorine," J. American Water Works Association (1951) 43: 553-560.	

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	L-62	J.K. Johannesson, "The Bromination of Swimming Pools," American Journal of Public Health (1960) 50: 1731-1736.	
	L-63	J.D. Johnson and W. Sun, "Bromine Disinfection of Wastewater," in "Disinfection-Water and Wastewater," J.D. Johnson, ed., pp 179-191 (Ann Arbor, MI: Ann Arbor Science, 1975).	
	L-64	J.K. Johannesson, "Anomalous Bactericidal Action of Bromamine," Nature (1958) 181: 1799-1780.	
	L-65	J.C. Albright, "Liquid Bromine Removes Obstinate Algae from 10,000 Gallon Tower for \$2.10 a Day," Petroleum Processing (1948) 3: 421-422.	
	L-66	Y. Kott et al., "Effect of Halogens on Algae-III. Field Experiment," Water Research (1969) 3: 265-271.	
	L-67	N. Betzer and Y. Kott, "Effect of Halogens on Algae-II. <i>Cladophora sp.</i> ," Water Research (1969) 3: 257-264. 14 pages	
	L-68	Y. Kott and J. Edlis, "Effect of Halogens on Algae-I. <i>Chlorella Sorokiniana</i> ," Water Research (1969) 3: 251-256.	
	L-69	"Evolution of Industrial Water Treatment," Betz Handbook of Industrial Water Conditioning, Seventh Edition, pp 7-15 (Trevose, PA: Betz Laboratories, Inc., 1976).	
	L-70	P.J. Sullivan and B.J. Hepburn, "The Evolution of Phosphonate Technology for Corrosion Inhibition," paper 496 (Houston, TX: NACE International, 1995), ppg 496/1 - 496/13.	
	L-71	W.A. Brungs, "Effects of Residual Chlorine on Aquatic Life," Journal of the Water Pollution Control Federation (1973) 45: 2180-2193.	
	L-72	A.T. Palin, "The Determination of Free and Combined Chlorine in Water by the Use of Diethyl-p-phenylene diamine," Journal of the American Water Works Association (1957) 49: 873-880.	
	L-73	C.W. Kruse, et al., "Halogen Action on Bacteria, Viruses, and Protozoa," in Proc. Natl. Specialty Conference on Disinfection, pp113-136 (New York, NY: ASCE, 1970).	
	L-74	R. Aull and T. Krell, "Design Features and their Affect on High Performance Fill," paper TP00-01 (Houston, TX: Cooling Technology Institute, 2000), ppg 1-31.	
	L-75	A.E. Gillam and R.A. Morton, "The Absorption Spectra of Halogens and Inter-Halogen Compounds in Solution in Carbon Tetrachloride," Proceedings of the Royal Society (London) (1929) vol 124: 604-616.	

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	L-76	S. Barratt and C.P. Stein, "On Bromine Chloride," Proceedings of the Royal Society (London) (1929) vol 122: 582-588.	
	L-77	J.F. Mills, "Interhalogens and Halogen Mixtures as Disinfectants," in Disinfection-Water and Wastewater, J.D. Johnson, ed., pp 113-143 (Ann Arbor, MI: Ann Arbor Science, 1975).	
	L-78	E.C. Wackenhuth and G. Levine, "An Investigation of Bromine Chloride as a Biocide in Condenser Water," (Pittsburgh, PA: Engineer's Society of Western Pennsylvania, 1974), pgs 1-14.	
	L-79	L.H. Bongers, T.P. O'Connor and D.T. Burton, "Bromine Chloride - An Alternative to Chlorine for Fouling Control in Condenser Cooling Systems," report no. EPA-600/7-77-053 (Research Triangle Park, NC: EPA Office of Research and Development, May 1977), 5 pages.	
	L-80	B.H. Keswick, "Bromine-Chloride as an Alternative Disinfectant to Chlorine of Human Enteric Viruses and Other Pathogens in Water and Wastewater", Doctoral Dissertation, University of Hawaii (Ann Arbor, MI: University of Microfilms, 1979), 16 pages.	
	L-81	R.M. Moore, et al., "Use of a New Bromine-based Biocide in a Medium-Size Cooling Tower," paper IWC-97-51 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1997), 6 pages.	
	L-82	G.D. Nelson, "Chloramines and Bromamines," in Kirk Othmer Encyclopedia of Chemical Technology, Vol. 5, pp 565-580 (New York, NY: John Wiley and Sons, 1979).	
	L-83	Z. Zhang and J.V. Matson, "Organic Halogen Stabilizers: Mechanisms and Disinfection Efficiencies," paper TP89-05 (Houston, TX: Cooling Tower Institute, 1989), pgs 1-19.	
	L-84	J.C. Peterson, "Practical Air Washer Treatment in Synthetic Fiber Manufacturing Plants," paper IWC-87-39 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1987), pgs 366-370	
	L-85	D. Vanderpool, M. Killoran, and R. Sergeant, "Improving the Corrosion Inhibitor Efficiency of Tolyltriazole in the Presence of Chlorine and Bromine," paper 157 (Corrosion 87, San Francisco, CA, 1987), ppg 157/1-157/9.	
	L-86	C. Spurrell and J.S. Clavin, "Solid Halogen Donor Economically Answers the Challenge of SARA Title III and Corrosion Concerns," paper 474 (Corrosion 93, NACE Annual Conference and Corrosion Show, 1993), ppg 474/1 - 474/15.	
	L-87	A. Smith, et al., "Bromine vs. Gaseous Chlorine: A Comprehensive Review of Case Histories," paper 637 (Corrosion 93, NACE Annual Conference and Corrosion Show, 1993), ppg 637/1 - 637/12.	
	L-88	D.S. Larson, et al., "Improved Microbiological Control Using Halogen Donors in a Pasteurizer," MBAA Technical Quarterly (1993) 30: 173-178.	

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	L-89	P. Sweeney, M. Ludensky, and O. Barokhov, "Mill Performance of a Brominated Methylethylhydantoin Slimicide," pp 437-447, Proceedings of the 1999 TAPPI Papermakers Conference (Norcross, GA: TAPPI, 1999).	
	L-90	F.J. Himpler, P.G. Sweeney, and M.L. Ludensky, "The Benefits of a Hydantoin-Based Slimicide in Papermaking Applications," APPITA Journal (September 2001) 54: 427-430.	
	L-91	C.J. Nalepa, "New Bromine-Releasing Granules for Microbiological Control of Cooling Water," paper 03716 (Corrosion 2003 Houston, TX: NACE International, 2003), ppg 03716/1-03716/15.	
	L-92	M. Lewin and M. Avarahami, "The Decomposition of Hypochlorite-Hypobromite Mixtures in the pH Range 7-10," Journal of the American Chemical Society, (1955) 77: 4491-4498.	
	L-93	Z. Zhang, "Disinfection Efficiency and Mechanisms of 1-Bromo-3-Chloro-5,5-Dimethylhydantoin," Doctoral Dissertation, University of Houston, May 1988, ppg 160, 162, 163.	
	L-94	J.C. Conley, E.H. Puzig, and J.E. Alleman, "Bromine Chemistry - An Alternative to Dechlorination in Cooling Water and Wastewater Disinfection," IWC-87-42 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1987), ppg 389-395.	
	L-95	R.M. Moore, W.C. Lotz, and V.R. Perry, "Activated Sodium Bromide-Artificial Marsh Treatment: A Successful Plant-Wide Program," paper IWC-95-61 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1995). 12 pgs.	
	L-96	C.J. Nalepa, et al., "Case Study: Minimization of Corrosion Using Activated Sodium Bromide in a Medium-Size Cooling Tower," paper 485 (Corrosion 96 NACE International Annual Conference and Exposition, Houston, TX: Nace International, 1996), 485/1 - 485/485/12.	
	L-97	F.P. Yu, et al., "Cooling Tower Fill Fouling Control in a Geothermal Power Plant," paper 529 (Corrosion 98, Houston, TX: NACE International, 1998), pg 529/1 - 529-11.	
	L-98	F.P. Yu, et al., "Innovations in Fill Fouling Control," IWC-00-03 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 2000), ppg 26-31.	
	L-99	T.C. Kuechler, et al., "Development of Monsanto's Towerbrom® Microbiocide, a New Bromine Microbiocide for Recirculating Water Systems," (McLean, VA: Association of Water Technologies, 1991), 1991 AWT Conference, pg 1-23	
	L-100	T.C. Kuechler, "A Towerbrom® Progress Report, (McLean, VA: Association of Water Technologies, 1993), ppg 1-15.	
	L-101	W.F. McCoy, et al., "Strategies Used in Nature for Microbial Fouling Control: Application for Industrial Water Treatment," paper 520 (Houston, TX: NACE International, 1998).	
	L-102	C.J. Nalepa, J.N. Howarth, and R.M. Moore, "A New Single-Feed Liquid Bromine Biocide for Treatment of Cooling Water," Presented at the AWT 1999 Annual Conference, (McLean, VA: Association of Water Technologies, 1999), 17 pages.	

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Substitute for form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	10/603,130
		Filing Date	June 24, 2003
		First Named Inventor	Eric W. Liimatta
		Group Art Unit	---
		Examiner Name	---
Fourth Supplemental (use as many sheets as necessary)	Attorney Docket Number	SU-7275	
Sheet 7 of 8			

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	L-103	Howarth et al., "First Field Trials of Single-Feed, Liquid Bromine Biocide For Cooling Towers", Paper TP00-09 (Houston, Tx.: Cooling Technology Institute, Jan. 31-Feb 2, 2000), 17 pages	
	L-104	M. Enzien and B. Yang, "On-line Performance Monitoring of Treatment Programs for MIC Control," paper 01279 (Corrosion 2001, Houston, TX: NACE International, 2001), 13 pages.	
	L-105	Howarth, J.N., et al. "A New, Bromine-Releasing Solid for Microbiological Control of Cooling Water", IWC-01-05, (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 2001), ppg 1-7.	
	L-106	B.R. Sook, T.F. Ling, and A.D. Harrison "A New Thixotropic Form of Bromochlorodimethylhydantoin: A Case Study," paper 03715 (Corrosion 2003, Houston, TX: NACE International, 2003), ppg 1-16.	
	L-107	C.J. Nalepa, et al., "Strategies for Effective Control of Surface-Associated Microorganisms: A Literature Perspective," IWC-02-01 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 2002), 19 pages.	
	L-108	W.G. Characklis and K.C. Marshall, ed., Biofilms: A Basis for an Interdisciplinary Approach, (New York, NY: John Wiley & Sons, 1987), pg 3-5.	
	L-109	J.W. Costerton and P.S. Stewart, "Battling Biofilms," Scientific American (July 2001) 285: 74-81.	
	L-110	M.L. Ludyanskiy and F.J. Himpler, "The Effect of Halogenated Hydantoins on Biofilms," paper 405 (Corrosion 97, Houston, TX: NACE International, 1997), ppg 405/1 - 405/11.	
	L-111	L.. McNamee, "Efficacy of Hypochlorite vs. Hypobromite in the Removal of a <i>Pseudomonas aeruginosa</i> Biofilm," summer intern report (Bozeman, MT: Montana State University, Center for Biofilm Engineering, 2000). ppg 1-23.	
	L-112	C.J. Nalepa, H. Ceri, and C.A. Stremick, "A Novel Technique for Evaluating the Activity of Biocides Against Biofilm Bacteria," paper 00347 (Corrosion 2000, Houston, TX: NACE International, 2000), ppg 00347/1 - 00347/19.	
	L-113	W.M. Thomas, J. Eccles, and C. Fricker, "Laboratory Observations of Biocide Efficiency against Legionella in Model Cooling Tower Systems," paper SE-99-3-4 (Atlanta, GA: ASHRAE Transactions, 1999), ppg 1-17.	
	L-114	"AWT Legionella Position Paper: 2003 Update," (McLean, VA: Association of Water Technologies, 2003). ppg 1-33.	

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OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
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	L-115	"Minimizing the Risk of Legionellosis Associated with Building Water Systems," ASHRAE Guideline 12-2000 (Atlanta, GA: ASHRAE, 2000), 19 pages.	
	L-116	"Legionellosis Guideline: Best Practices for Control of Legionella," (Houston, TX: Cooling Tower Institute, February 2000), 8 pages.	
	L-117	Legionellosis: Guidelines for Control of Legionnaires' Disease," (Melbourne, Australia: Health Department Victoria, 1989, (reprinted in 1999), 9 pages.	
	L-118	"Control of Legionella in Cooling Towers: Summary Guidelines," (Madison, WI: Wisconsin Division of Health, August 1987), 45 pages.	
	L-119	M.R. Freije, "Legionellae Control in Health Care Facilities: A Guide for Minimizing Risk," (Indianapolis, IN: HC Information Resources, Inc., 1996, ppg 25-41.	
	L-120	Regulatory Advisory, Waterborne Pathogens - Compliance with Joint Commission on Accreditation of Healthcare Organizations Requirements, web address www.ashe.org/media/water.html , visited 6/12/2002, 9 pages.	
	L-121	E. McCall, J.E. Stout, V.L. Yu, and R. Vidic, "Efficacy of Biocides against Biofilm-Associated Legionella in a Model System," paper IWC 99-19 (Pittsburgh, PA: Engineers' Society of Western Pennsylvania, 1999), 7 pages.	
	L-122	C.J. Nalepa, et al., "The Activity of Oxidizing Biocides towards Legionella pneumophila and the Impact of Biofilms on its Control," paper 01278 (Houston, TX: NACE International, 2001, 21 pages.	
	L-123	C.J. Nalepa, et al., "The Control of Bacteria on Surfaces: Effectiveness of Bromine-Based Biocides towards Microbial Biofilms and Biofilm-Associated Legionella pneumophila," paper TP02-13 (Houston, TX: Cooling Technology Institute, 2002), 22 pages.	
	L-124	C.J. Nalepa, et al., "Case Study: A Comparison of Bromine-Based Biocides in a Medium-Size Cooling Tower," paper TP98-09 (Houston, TX: Cooling Tower Institute, 1998), 22 pages.	
	L-125	R. Elsmore, "Development of Bromine Chemistry in Controlling Microbial Growth in Water Systems," International Biodeterioration and Biodegradation (1994) 245-253.	
	L-126	C.J. Nalepa, J.N. Howarth, and F.D. Azarnia, "Factors to Consider When Applying Oxidizing Biocides in the Field," paper 02223 (Houston, TX: NACE International, 2002), 20 pages.	

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